(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 632 288 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
03.07.1996 Bulletin 1996/27

(43) Date of publication A2:
04.01.1995 Bulletin 1995/01

(21) Application number: 94110287.3

(22) Date of filing: 01.07.1994

(51) Int. Cl.[6]: G01S 13/75, G01S 13/02

(84) Designated Contracting States:
DE FR GB IT NL

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(54) Frequency diversity transponder arrangement

(57) A method of communicating between a transponder and an interrogator. The interrogator (10) transmits a wireless RF interrogation which is received by the transponder (12). The transponder (12) then transmits a wireless RF response. The wireless RF response has a first channel response centered at frequency FDX1=RF+SC , a second channel response centered at frequency FDX2=RF-SC , and a third channel response centered at frequency FDX3=SC . The third channel response is a spurious signal resulting from using a non-linear element (32) as the transponder modulator (32,34). The interrogator (10) receives this wireless RF response. The response is received in the three channels with a first circuit (82) operable to receive said first channel response, a second circuit (86) is operable to receive said second channel response, and a third circuit (86,88) is operable to receive said third channel response. A controller (102) then selects the response from one of said first, second, or third circuits (82,86,88) for demodulating. A demodulator (100) may then demodulate one the selected channel responses. Other arrangements, systems, and methods are disclosed.

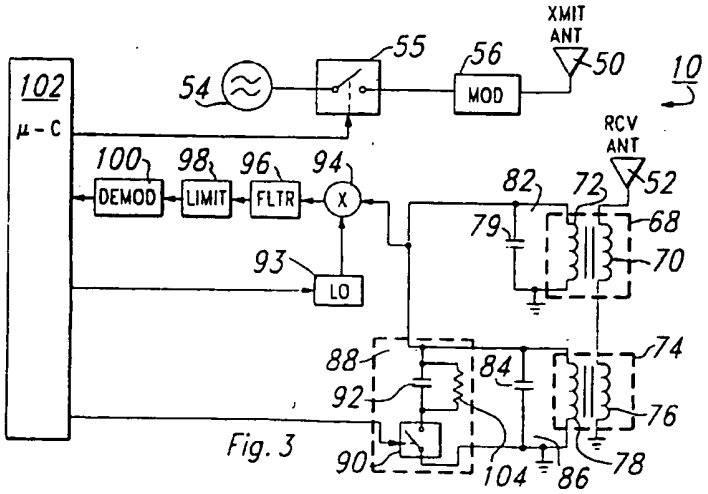

Fig. 3

EP 0 632 288 A3

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EUROPEAN SEARCH REPORT

Application Number
EP 94 11 0287

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US-A-4 725 841 (NYSEN PAUL A ET AL) 16 February 1988 * the whole document *	1,16,17	G01S13/75 G01S13/02
A	WO-A-82 01437 (DETERRENT TECH CORP) 29 April 1982 *abstract ; fig 1 *	1,16,17	
A	WO-A-87 03698 (STIFTELSEN INST MIKROVAGS) 18 June 1987 * the whole document *	1,16,17	
D,A	EP-A-0 301 127 (TEXAS INSTRUMENTS DEUTSCHLAND) 1 February 1989	1	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

G01S

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	8 May 1996	Deconinck, E

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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EPO FORM 1503 03.82 (P04C01)